# (19) World Intellectual Property Organization International Bureau

Organization
International Bureau

OM



## 1 8414 ENNEW N ELENE NEN ELLN ELLN ELLN EIGH I 11 NEN 1865 NEU 1865 EN SEN EN ELLE SEN ELL NEU 1861 (ELL 1865)

(43) International Publication Date 23 December 2004 (23.12.2004)

PCT

# (10) International Publication Number WO 2004/111536 A1

(51) International Patent Classification<sup>7</sup>: 14/58

F23D 14/02,

(21) International Application Number:

PCT/EP2004/006639

(22) International Filing Date: 18 June 2004

18 June 2004 (18.06.2004)

(25) Filing Language:

English

(26) Publication Language:

**English** 

(30) Priority Data:

19 June 2003 (19.06.2003) I

MO2003A000180 MO2004A000031

19 June 2003 (19.06.2003) 1

11 February 2004 (11.02.2004) IT

(71) Applicant (for all designated States except US): WOR-GAS BRUCIATORI S.R.L. [IT/IT]; Via Coppi, 17, I-41043 Formigine (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): GILIOLI, Massimo [IT/IT]; Via Valeggio, 38, I-41049 Sassuolo (IT). FOGLIANI, Giuseppe [IT/IT]; Via Salvo D'Acquisto,

11, I-41043 Formigine (IT). WIJKMANS, Stephanus [NL/IT]; Via Marconi, 69, I-41042 Fiorano Modenese (IT). DOTTI, Massimo [IT/IT]; Via Don Orione, 30, I-41010 Magreta (IT). VECCHI, Renzo [IT/IT]; Via Giolitti, 26, I-41043 Formigine (IT). BERTHOLD, Gunther [DE/IT]; Via Fornaci, 34, I-41014 Solignano di Castelvetro (IT). MACH, Wenzel [DE/DE]; Orangerie Strasse, 39, Dessau - Mosigkau (DE).

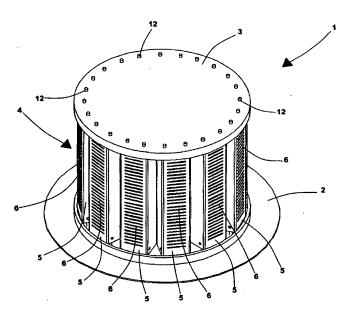
(74) Agent: CRUGNOLA, Pietro; Luppi Crugnola Bergamini & Partners S.R.L., Viale Corassori, 54, I-41100 Modena (IT).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: BURNER WITH DIFFUSER RESISTANT TO HIGH OPERATING TEMPERATURES



(57) Abstract: A burner (1; 1a; 20; 25; 111; 115; 118) suppliable with a mixture of air and fuel, comprising a burner body provided with a diffuser (4; 4a, 4b; 23; 113; 117; 119) in which openings are made for the passage and subsequent combustion of said mixture, said diffuser (4; 4a, 4b; 23; 113; 117; 119) is divided into a plurality of diffuser elements (5; 26; 26a; 26b; 26c; 26d; 37; 44; 46; 57; 60; 70; 75; 89; 93; 98; 106) that are adjacent to one another, each diffuser element (5; 26; 26a; 26b; 26c; 26d; 37; 44; 46; 57; 60; 70; 75; 89; 93; 98; 106) being at least partially free to dilate in at least one direction.



## WO 2004/111536 A1



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

### Declarations under Rule 4.17:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA,

SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designation US
- of inventorship (Rule 4.17(iv)) for US only

#### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.